



## News Updates

- ◆ The U.S. NRC voted to approve the issuance of the COLs for Southern Nuclear's Vogtle Units 3 and 4 on February 9, 2012. The issuance marks the first COL ever to be issued and the construction of a new nuclear power plant in more than 30 years.
- ◆ SCE&G's V.C. Summer Units 2 and 3 received approval for COLs on March 30, 2012, making them the second US new-build in 30 years.
- ◆ The Tennessee Valley Authority has revised the cost and time estimates of Unit 2 at the Watts Bar Nuclear Plant. The new schedule estimates the cost to be in the range of \$4 billion with a completion date of late 2015.
- ◆ South Mississippi Electric Power Association (SMEPA) has signed a letter of intent with Santee Cooper for negotiations in a power purchase agreement, which would allow them to buy between 2-7% of the capacity and power output of the new VC Summer units. The agreement also allows for SMEPA to purchase a portion of Santee Cooper's 45% ownership interest.

## Combined Construction and Operating License (COL)

**Summary:** Eighteen COL applications have been docketed, ten of which (totaling 16 nuclear reactors) remain under active NRC review. NRC suspended review of five applications due to changes in technology or economic considerations; one additional application was withdrawn and resubmitted as an ESP. The Reference COL (R-COL) application has been submitted for five reactor designs (ESBWR R-COL was transferred to Fermi since North Anna changed to the US-APWR); the 10 subsequent COLs (S-COLs) will incorporate the corresponding R-COL application by reference, noting any site-specific departures. Southern Nuclear's Vogtle Units 3 and 4 and SCE&G's VC Summer Units 2 and 3 have received COLs.

	UTILITY	SITE/LOCATION		REACTOR/ NO. UNITS		COLA DATES			REVIEW PHASE IN PROGRESS	
						Submitted	Docketed	Issued	Safety <sup>4</sup>	Environ. <sup>5</sup>
Issued	Southern Nuclear	Vogtle	GA	AP1000	2	03/31/08	05/30/08	02/10/12	Completed	Completed
	SCE&G	V.C. Summer	SC	AP1000	2	03/27/08	07/31/08	04/10/12	Completed	Completed
Active COL Applications	STP Nuclear Operating Co.	South Texas Project	TX	ABWR <sup>1</sup>	2	9/07	11/29/07	-	Ph. 2	Completed
	Luminant (TXU)	Comanche Peak	TX	US-APWR <sup>1</sup>	2	9/19/08	12/2/08	-	Ph. 2	Completed
	UniStar (Constellation)	Calvert Cliffs	MD	US-EPR <sup>1</sup>	1	3/08	6/3/08	-	Ph. 2	Completed
	DTE Energy	Fermi	MI	ESBWR <sup>1</sup>	1	9/18/08	11/25/08	-	Ph. 2	Ph. 3
	Dominion Energy	North Anna	VA	US-APWR	1	11/27/07	1/28/08	-	Ph. A	Ph. 2
	Duke Energy	William States Lee	SC	AP1000	2	12/13/07	2/25/08	-	Ph. B	Ph. 2
	Florida Power and Light	Turkey Point	FL	AP1000	2	6/30/09	9/4/09	-	Ph. A	Ph. 2
	PPL (UniStar)	Bell Bend	PA	US-EPR	1	10/10/08	12/19/08	-	Ph. A	Ph. 2
	Progress Energy	Shearon Harris	NC	AP1000	2	2/19/08	4/17/08	-	Ph. B	Ph. 2
	Progress Energy	Levy	FL	AP1000	2	7/30/08	10/6/08	-	Ph. D	Ph. 3
Suspended	Entergy (NuStart)	Grand Gulf	MS	ESBWR	1	2/08	4/17/08	-	Suspended	Suspended
	Entergy	River Bend	LA	ESBWR	1	9/25/08	12/4/08	-	Suspended	Suspended
	AmerenUE (UniStar)	Callaway	MO	US-EPR	1	7/24/08	12/12/08	-	Suspended	Suspended
	UniStar (Constellation)	Nine Mile Point	NY	US-EPR	1	9/30/08	12/11/08	-	Suspended	Suspended
	TVA (NuStart)	Bellefonte	AL	AP1000	2	10/07	1/18/08	-	Suspended	Suspended

<sup>1</sup> Reference COL Application (R-COL)

<sup>4</sup> **Safety Review:** **R-COL** **Ph 1** Issue RAIs **Ph 2** SER w/Open Items **Ph 3** ACRS Review **Ph 4** Advanced SER/ No OI **Ph 5** ACRS Review **Ph 6** Final SER  
**S-COL** **Ph A** Issue RAIs and supplemental RAIs **Ph B** Advanced SER/ No OI **Ph C** ACRS Review **Ph D** Final SER

<sup>5</sup> **Environmental Review Phases:** **Ph 1** Environmental Scoping Report **Ph 2** Draft EIS **Ph 3** Public comment **Ph 4** Final EIS

## Reactor Design Certification (DC)

**Summary:** Two reactor designs that are being considered for future builds are certified; five SMR designs are in the pre-application stage and two renewal applications are under NRC review.

- GE ABWR – Certified in 1997 (10CFR52 App A). Toshiba and GE have also submitted Design Certification renewal applications that are currently under review.
- Westinghouse AP1000 – Amended design certified on December 30, 2011 (10CFR52 App D).
- AREVA US-EPR – Submitted December 12, 2007, and docketed February 25, 2008; rulemaking expected in June 2013.
- GE ESBWR – Final Design Approval in March 2011; rulemaking expected fall 2012.

- Mitsubishi Heavy Industries US-APWR – Submitted December 31, 2007, and docketed February 29, 2008; rulemaking expected in October 2014.
- KEPCO APR-1400 – Pre-application interactions began in January 2012. Design certification application expected March 2013.
- NuScale SMR – Pre-application interactions began in July 2008. Design certification application expected in the first half of 2013.
- B&W mPower – Pre-application interactions began in July 2009. Design certification application expected in the fourth quarter of 2013.
- Toshiba 4S – Letter of Intent submitted on March 15, 2011. Design certification application expected in the second quarter of 2012.
- PBMR SMR – Letter of Intent submitted on March 24, 2009. Design certification application expected in FY 2013.



## Early Site Permits (ESP)

**Summary:** Four ESPs issued; two under review:

- The following ESPs have been issued: Exelon – Clinton (IL), 3/15/07; Entergy – Grand Gulf (MS), 4/5/07; Dominion – North Anna (VA), 11/27/07; Southern – Vogtle site (GA), 08/26/09.
- On March 25, 2010, Exelon submitted an ESP application for its Victoria County site. The final SER and EIS are expected to be completed by mid 2014.
- PSEG submitted an ESP application for its nuclear plant site in Salem County, New Jersey, on May 26, 2010. The final SER and EIS are expected in mid to late 2014.
- NRC anticipates two further ESP applications at Blue Castle and Callaway.

## New Nuclear Plant Orders

**Summary:** Six plant construction contracts have been initiated; nine power companies have ordered large component forgings from three reactor vendors; one vendor ordered other large equipment.

**Long-Lead Equipment Orders:** Toshiba and Westinghouse have placed large forging orders.

- SCE&G and Southern have contracted with Westinghouse for long-lead component forgings.
- AREVA's heavy component manufacturing facility in Newport News, Virginia has been postponed until market conditions become more favorable
- The first AP1000 component for the plant's auxiliary building was delivered to the Vogtle site in July 2011 from Shaw Modular Solutions located in Port of Lake Charles Louisiana.

**Plant Construction Contracts:** Engineering, Procurement, and Construction (EPC) contracts signed for six plants.

- Southern Nuclear with Westinghouse and Shaw Group for two AP1000s at Vogtle.
- SCE&G and Santee Cooper with Westinghouse for two AP1000s at V.C. Summer.
- Progress Energy with Westinghouse and Shaw Group for two AP1000s at Levy County.
- STPNOC with Toshiba for two ABWRs at South Texas Project.
- TVA has signed a contract with AREVA for Engineering, Construction and component-replacement at Bellefonte Unit 1.
- NuScale has signed an agreement with Fluor Corp. for engineering and construction services for future NuScale facilities.

## New Plant Construction, Operation, Deferral

**Summary:** Site preparatory work continues for V.C. Summer Units 2 and 3 and Vogtle Units 3 and 4. TVA is proceeding with the completion of the Watts Bar 2 and Bellefonte 1 reactors.

**New Nuclear Plants under Construction:** COLs for Vogtle Units 3 and 4 and V.C. Summer Units 2 and 3 have been issued.

- At the Vogtle site, the containment vessel bottom head and the first containment vessel ring of Unit 3 have been assembled. The condenser for Unit 3 has arrived in the first rail delivery of components. Full nuclear construction can now begin with the issuance of the COL on February 10, 2012.
- Construction is on schedule for V.C. Summer Units 2 and 3 to come online in 2017 and 2018, respectively.
- Watts Bar 2, near Spring City, Tennessee, is now expected to come online late 2015 at a revised cost of \$4 billion.
- Bellefonte Unit 1 construction will begin after Watts Bar 2 completes its first fuel load. The project is estimated to cost \$4.9 billion
- Construction of some reactor designs to be built in the US is underway in other countries: four AP1000s in China, two APWRs in Japan, one EPR in Finland and France and another two in China; four ABWRs have been operated in Japan and four are nearing completion in Japan and Taiwan.

**New Nuclear Plant Begin Operation:** None.

## Federal Financial Incentives

**Summary:** EPC 2005 incentives are at various stages of development: two rules issued and one notice published.

**Standby Support:** Rule issued, no contract issued.

- Final Rulemaking Issued August 2006.

**Production Tax Credits:** Notice issued.

- Internal Revenue Bulletin 2006-18 published May 2006.
- Treasury/IRS may issue additional guidance on Tax Credits for new nuclear plants; however, a date has not been set.

**Nuclear Energy Facility Loan Guarantees:** Congress granted DOE authority to issue \$20.5 billion in guaranteed loans.

- DOE issued solicitations for \$18.5 billion in loan guarantees for new nuclear power facilities and \$2 billion for the "front end" of the nuclear fuel cycle on June 30, 2008.
- DOE offered a conditional commitment agreement for \$2 billion to AREVA to support the Eagle Rock Enrichment Facility in Idaho Falls, Idaho.
- DOE has issued conditional commitment agreements to Georgia Power Corp., Oglethorpe Power Corp. and the Municipal Authority of Georgia for the financing of Vogtle Units 3 and 4, totaling \$8.33 billion.